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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/785,598	02/16/2001	Thomas Thaler	700-212RP	4386
22191	7590	06/28/2005	EXAMINER FERRIS, DERRICK W	
GREENBERG-TRAURIG 1750 TYSONS BOULEVARD, 12TH FLOOR MCLEAN, VA 22102			ART UNIT 2663	PAPER NUMBER

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/785,598	THALER ET AL	
	Examiner	Art Unit	
	Derrick W. Ferris	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. **Claims 1-24** as amended are still in consideration for this application. Applicant has amended claims **1, 13, 16, 18, and 19**. Applicant has canceled no claims. Applicant has added claims **21-24**.
2. Examiner **withdraws** the anticipated rejections to *Weis* and *Hulyalkar* and corresponding obviousness rejections for Office action filed **7/19/2004**. Applicant's arguments, see Office action, filed 7/19/2005, with respect to the rejection(s) of claim(s) under *Weis* and *Hulyalkar* have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of *Frounin et al.* (see below). In particular, based on the claims as amended, examiner notes no support found in applicant's provisional application 60/183,617 filed 2/18/2000. Instead support was found in applicant's provisional application 60/246,012 filed 11/3/2000 in Appendix B (see e.g., figure 1 on page 4 of Appendix B). As such, see the new rejection below as necessitated by amendment.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-10 and 13-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,778,543 B1 to *Frouin et al.* ("*Frouin*") in view of U.S. Patent No. U.S. Patent No. 6,032,261 A to *Hulyalkar*.

As such to **claim 1**, see e.g., figure 3 of *Frouin*. Here a first segment is D and a second segment is E. The network-wide time signal is generated by each CM as part of the CSP (see e.g., figure 10), see e.g., column 14, lines 12-14 (i.e., the CM on segment D is a first node and the CM on segment E is the second node). The network-wide signal is distributed in the second segment E as part of a synchronization command (see e.g., figure 11) to the slave CM where the slave CM in turn uses the signal to synchronize the nodes on its segment. As such, the first bridge port is the port connecting bridge Pde to segment D and a second bridge port is the port connecting bridge Pde to segment E.

Frouin is silent or deficient to the further limitation of converting at each respective node, the network-wide time signal to a local synchronization signal. In particular, *Frouin* teaches that each node on the segment receives the CSP packet and performs synchronization but may not be clear that the local signal is converted.

Hulyalkar teaches the further recited limitation above at e.g., column 5, lines 24-30.

The proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Frouin* by clarifying how the synchronization is performed at the local node.

As such, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the above limitation. In particular, the motivation for modifying the reference or to combine the reference teachings would be to clarifying how the registers are reset. In particular, *Hulyalkar* cures the above-cited deficiency by providing a motivation found at e.g., column 5, lines 24-30. Second, there would be a

reasonable expectation of success since both references teach CSP packets. Thus the references either in singular or in combination teach the above claim limitation(s).

As to **claims 2-4**, see e.g., column 5, lines 24-30 of *Hulyalkar* which teaches resetting the cyclic counter which reduces drift of propagation delay. In addition, *Frouin* further teaches that the bridge sends a command to the slave CM so that the network timing is synchronous which reduces propagation delay since the network timing signal is then sent on that particular bus via the slave CM, see e.g., column 4, lines 46-49 with respect to delay phase as taught in the reference. For example, the readjusted network timing signal in the slave CM can cause the local node to compensate for delay by adding an extra signal delay to the local synchronization signal.

As to **claim 5**, see e.g., the `cycle_start` packet.

As to **claim 6**, see e.g., column 2, lines 51-67 where the frequency is based off a cycle clock.

As to **claim 7**, see e.g., figure 4 with respect to phase locking the local synchronization signal and column 5, lines 1-29.

As to **claim 8**, see similar rejection to claims 2-4.

As to **claim 9**, see similar rejection to claims 2-4.

As to **claim 10**, see e.g., column 3, lines 20-54 with respect to being IEEE 1394 compliant.

As to **claim 13**, see similar rejection to claim 1.

As to **claim 14**, see similar rejection to claim 2.

As to **claim 15**, see similar rejection to claim 3.

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As to **claim 16**, see similar rejection to claim 4.

As to **claim 17**, both references teach an IEEE 1394 bus, see e.g., column 10, lines 53 of *Frouin*.

As to **claim 18**, see similar rejection to claim 1. Examples of applications include e.g., TV, PC, VCRs, etc., see e.g., column 1, lines 12-30.

As to **claim 19**, see similar rejection to combined claims 2 and 3.

As to **claim 20**, see similar rejection to claim 17.

As to **claim 21**, see similar rejection to claim 1 where the CSP packet is taught in figure 10 of *Frouin*.

As to **claim 22**, see similar rejection to claim 1 where the CSP packet includes a cycle_time data is taught in figure 10 of *Frouin*.

As to **claim 23**, see figure 13 where the command is the bus time.

As to **claim 24**, the overlapping is based on setting the counters in the CP.

5. **Claims 11 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,778,543 B1 to *Frouin et al.* ("*Frouin*") in view of U.S. Patent No. 6,032,261 A to *Hulyalkar* in view of "Application Critical Parameters for Rubidium Standards" to ("*Weidemann*").

In making a proper obviousness rejection under MPEP 706.02(j), the examiner will address the following four steps:

- a) *the relevant teachings of the prior art relied upon, preferably with reference to the relevant column or page number(s) and line numbers where appropriate;*
- b) *the difference of differences in the claim(s) over the applied cited references;*

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- c) *the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter; and*
- d) *an explanation why one skilled in the art at the time of the invention was made would have been motivated to make the proposed modification.*

As such to **claim 11**, for step (a) *Hulyalkar* discloses limitations in the base claim.

For step (b) *Hulyalkar* is silent or deficient to the further limitation wherein the step of generating the network wide time signal includes the step of utilizing a rubidium reference signal generator. In particular, *Hulyalkar* discloses using a crystal oscillator 42, see e.g., column 4, lines 40-51 and figure 3.

Weidemann teaches the further recited limitation above at e.g., in the summary on page 87.

For step (c), the proposed modification of the above-applied reference(s) necessary to arrive at the claimed subject matter would be to modify *Hulyalkar* to clarify that an oscillator is a rubidium oscillator.

In order to establish a prima facie case of obviousness for step (d), three basic criteria must be met. The three criteria according to MPEP 706.02(j) are as follows:

First there must be some suggestion or modification, either in the reference(s) themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

As such, for step (d) examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include the further limitation wherein the step of generating the network wide time signal includes the step of utilizing a rubidium reference signal generator. In particular, the motivation for modifying the reference or to combine the reference teachings would be to provide highly reliable

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clocking source. In particular, *Weidemann* cures the above-cited deficiency by providing a motivation found at e.g., in the summary on page 87. Second, there would be a reasonable expectation of success since using rubidium oscillators is well known in the art as a clocking source. Thus the references either in singular or in combination teach the above claim limitation(s).

As to **claim 12**, examiner notes a similar rejection as claim 11 where *Weidemann* also teaches using GPS as taught in the summary on page 87 (i.e., GPS provides a long term reference for Rb clocks). In particular, one skilled in the art would be motivated to use GPS since it would be expensive to deploy a rubidium clock at every site such that each site can get their clocking from one central source via GPS.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123.

The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris
Examiner
Art Unit 2663


DWF


RICKY NGO
PRIMARY EXAMINER

8/25/05